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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/554,843	05/19/2000	PIERRE NICAISE	35615.180	3718

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EXAMINER

KNEPPER, DAVID D

ART UNIT	PAPER NUMBER
2654	8

DATE MAILED: 02/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/554,843

**Applicant(s)**

NICAISE, PIERRE

**Examiner**

David D. Knepper

**Art Unit**

2654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

1. Applicant's correspondence filed on 18 November 2003 (Extension of Time and Response, paper #6-7) has been received and considered. Claims 1-10 are pending.

**Title**

2. The title is objected to because it fails to give a meaningful description of the coding process.

**Specification**

3. The disclosure is objected to because of the following informalities: "terminal" is not used consistently in the specification and claims. This word is used as referring to a simple telephone in specification's broadest definition. In narrower definitions, the applicant indicates that a "terminal" can also be a speech coder or a speech decoder. Therefore, these desired results are interpreted as admitted prior art since these functions are all notoriously well known.

Appropriate correction is required.

**Claims**

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 8 and 9 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Gersho (Vector Quantization and Signal Compression) or Gerson (5,675,702) or Lozach (5,583,963).

All 3 references match input speech to patterns forming "primary code words" and then use a difference calculation to further encode using "secondary code words" upon which the claims read.

Gersho teaches that it is common practice to design code books by matching an input vector and comparing the result in the first stage. The actual distortion (applicant's "differences") is then used to determine the need for ~~to determine the need for~~ second stage encoding (see page 639, bottom).

Gerson similarly teaches speech coding using multistage codebook technique illustrated in figure 4 which selects a primary vector (408) and a secondary vector (412) based on a residual error (410).

Lozach also teaches the use of a multistage codebook method for speech coding (see figure 10a-10b).

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-7 are rejected under 35 U.S.C. § 103 as being unpatentable over Gersho or

Gerson or Lozach.

It is noted that the prior art does not use identical terminology but would have been obvious to one of ordinary skill in the art that the broad terms would read on those utilized by the prior art noted above as explained below. However, Official Notice is taken that these are all common calculations in speech signal processing. Examples are noted below from prior art.

Claims 2, 3: "Spectra of lines of frequencies, weighting coefficients normed with respect to the energy and integrated into the secondary code word" is taught by Gersho as standard tools used by those designing vector quantizers. See his weighting and norm calculations on pages 326 and 327 where he discusses commonly known distortion measures. See also page 509 where he teaches that line spectral frequencies (LSF - also known as line spectral pairs LSP) are common design choices among well known types of LPC parameters.

Gersho's use of VSELP would render obvious well known types of Linear Prediction as taught in column 1, line 56-57 (Line Spectral Frequencies (LSF)).

Claim 4: Coding amplitude extremes is taught by Gersho's high gain vectors, page 639.

Claim 5: Limiting the calculations of difference to a single average spectrum is considered obvious in view of Gersho's frame sample mean or average norm, page 639, bottom.

Claim 6: Limiting the frequency to 3 bands is obvious in view of Gersho's example of splitting vectors to represent the first 4 components, page 509. One of ordinary skill in the art knows that vowel sounds may be recognized using as few as 3 formant frequencies.

Claim 7: The use of a single coefficient for each band is typical for LPC which typically employ the transmission of a vector of LPC parameters, page 509.

8. Claim 10 is rejected under 35 U.S.C. § 103 as being unpatentable over Gersho, Gerson or Lozach further in view of Zehavi (5,581,575).

It is noted that Gersho, Gerson or Lozach do not teach the combination including facsimile. However, Lozach suggests it in figure 2 with his auxiliary data input, Data Insertion System 19. Zehavi explicitly teaches the use of facsimile in column 5, line 28-29, 50-51 where he teaches that the combination is possible with any data transmitter.

#### **Prior Art**

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fujimoto (5,488,704) Ramaswamy (6,009,387) are cited to show that it is well known to use multiple vectors, in combination to code speech.

10. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

TC2600 Fax Center  
(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Knepper whose telephone number is (703) 305-9644.

The examiner can normally be reached on Monday-Thursday from 07:30 a.m.-6:00 p.m.

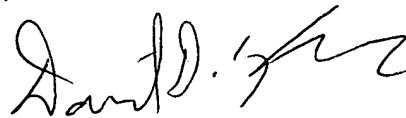
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil, can be reached on (703) 305-9645.

Any inquiry of a general nature or relating to the status of this application should be directed to customer service at (703) 306-0377.

The facsimile number for TC 2600 is (703) 872-9314.

A handwritten signature in black ink, appearing to read "David D. Knepper", with a stylized flourish at the end.

David D. Knepper  
Primary Examiner  
Art Unit 2654